Error Description	Cause	Fixing
After power on the converter indicates **Not Ready** and **Error**	Input "Emergency Stop" is not properly or not wired at all.	+24V Signal at this input
	The converter is at excess temperature	> Let the converter cool down > Check, if the fan is working properly or maintain that air flow around the heatsink is sufficient > Slow down the tooling process
	Pulse inhibitor circuit is engaged, at devices with such a circuit (SFU0303)	> For disengaging wire +24V to the appropriate Pin > Wire a bridge between X2.1 - X2.10 (SFU0303)
	A spindle diagram which is not valid is selected	Change spindle characteristic with the help of the front panel keys or with *SFU-Terminal*
	Short circuit detection of the out put has tripped	> Check, if the spindle is blocked > Check, if there is a short circuit within the spindle > Check, if there is a Ground fault (at least one prong of the spindle cable is connected with PE) > Check, if there is a short circuit within the spindle cable

Error Description	Cause	Fixing
After power on the converter indicates **Not Ready** and **Error** and the supervision auswertung of the temperature sensor is activated in the spindle characteristic	No spindle connected	Connect spindle
	No temperature sensor present within the spindle	Disable in spindle characteristic menu in *SFU-Terminal* the Temperature Sensor button
	Temperature sensor of the spindle defective	> Change spindle > Disable in spindle characteristic menu in *SFU-Terminal* the Temperature Sensor button

Error Description	Cause	Fixing
In case of connecting the converter with a PC or after launching the SW *SFU-Terminal* the **Converter is detected and recognized**	Incorrect connection cable or wiring fault	> Check cable for proper Pinout. > Verify at USB cables that it's length is not longer than 2m > Try to use original BMR cables, only.
	In case of using RS232	> Use the USB-Interface at the PC together with a USB-RS232 converter. > For use with SFU 0303 a specific RS232 cable is required
	In case of using a USB-RS232 converter the USB-driver is not installed correctly.	install driver
	unsure	Restart *SFU-Terminal*
Start with push buttons not possible	Start button deactivated	Enable Start button by un-checking the checkbox "Block Start Button"

Error Description	Cause	Fixing
Spindle does not start, in spite of a valid signal for Start	An input is assigned with the function **Emergency Stop** and configured as "Low Active". > This is default state on delivery	> For unlocking, a signal of "HI" / +24V is required at this input > Deactivate this function or setup as "High Active"
	The evaluation of the temperature sensor is activated in the spindle characteristic, but it is not connected or a sensor isn't implemented within the spindle -> in this case **Error** is indicated, additionally	> Connect the temp sensor wires with the SFU . > un-check the button "Temp Sensor" in the spindle characteristic in *SFU-Terminal*
	The spindle test is engaged, and the spindle cable or the spindle itself is defective	> Check cable and connections for proper wiring or short circuit > Check spindle
	Spindle cable and spindle are OK, and the spindle test is activated > Spindle cable is too long With activated spindle test, a test current is send via spindle cable to the spindle by applying a voltage at output lines. In case that this current is too low, or a wrong spindle characteristic selected, it does not match to the reference values and the spindle test fails.	> Select correct spindle characteristic > In the spindle characteristic the value of the start voltage has to be increased. -> contact BMR

Error Description	Cause	Fixing
The error message **Spindle not ready** is indicated.	Spindle is at excess temperature	Let it cool down > Check, if the characteristic matches with the spindle
	PTC in the spindle is defective	change spindle
	The PTC-wires within the spindle cable are defective	exchange cable or fix the connection
Start via Digital Input is not possible	Start via Analogue input is activated.	Deactivate Start via analogue input. -> Manual: "Analogue Inputs" and activate Digital Start
	Set value for duty speed is too low	Increase Analogue value for duty value. > A spindle start is carried out after reaching the required minimum voltage according to the scaling, only
It is displayed **Error Char xx** or **E xx**	The selected spindle characteristic at memory place xx is wrong, invalid or corrupted.	> Select matching characteristic with the help of the buttons at the front panel or with *SFU-Terminal* > Contact BMR

Error Description	Cause	Fixing
With activated speed sensor: The spindle runs properly, but sometimes there appears the message **Encoder Error**.	Loose connection in spindle, spindle cable or at the connectors	> Check spindle cable and exchange potentially > Check connectors
	Disturbances on the signal or the signal amplitude is too low > sensor wires in spindle cable are not shielded	> Exchange spindle cable > for verification test exchange spindle
Error **Without Spindle, Cable** is displayed	Spindle cable is defective	> Check the 3 spindle phase wires
	Spindle cable too long With activated spindle test, a test current is send via spindle cable to the spindle by applying a voltage at output lines. In case that this current is too low, or a wrong spindle characteristic selected, it does not match to the reference values and the spindle test fails.	> Check, if the proper characteristic is selected. > Increase value for start voltage in the spindle characteristic -> contact BMR > Deactivate function "Spindle test"